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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/780,089	02/17/2004	Arup Acharya	YOR920040040US1	9901
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GEORGE A. WILLINGHAN, III AUGUST LAW, LLC P.O. BOX 19080 BALTIMORE, MD 21284-9080			EXAMINER COBURN, CORBETT B	
			ART UNIT 3714	PAPER NUMBER
			NOTIFICATION DATE 09/23/2010	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/780,089	<b>Applicant(s)</b> ACHARYA ET AL.	
	<b>Examiner</b> Corbett B. Coburn	<b>Art Unit</b> 3714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 September 2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 13-16, 18, 19, 21, 22, 24-29, 31, 32, 34, 35 and 37-41 is/are pending in the application.
- 4a) Of the above claim(s) 15 and 28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13, 14, 16, 18, 19, 21, 22, 24-27, 29, 31, 32, 34, 35 and 37-41 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

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## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 13 & 26 and all those depending from them are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 13 & 26 recite, “each audio mixer separate from the game participants, game server & conference server”. The original specification states that the audio mixer may be integrated into the conference server. (Paragraph 0020) Therefore, it is clear that the importance of the claimed element was not within the grasp of the Applicant at the time of the invention & therefore cannot constitute Applicant’s inventive concept.
3. Claims 40 & 41 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicant now claims that the attribute is separate from physical proximity in the game environment. Applicant clearly failed to grasp the importance of this concept prior to receiving a rejection.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 13 & 26 and all claims depending therefrom are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Claims 13 & 26 recite, “each audio mixer separate from the game participants, game server & conference server”. It is unclear whether Applicant is attempting to claim “the game participants” or not. It goes without saying that the audio mixer, which is a piece of computer hardware/software is separate from the game participants, who are humans. Does Applicant intend to claim the people playing the game? Or the computer associated with each game participant? For purposes of examination, the Examiner will assume the later.

***Claim Rejections - 35 USC § 101***

7. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

8. Claims 26, 27, 29, 31, 32, 34, 35, 37 & 38 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The latest guidance the Examiner has received is that claims reciting a “tangible computer readable medium” may be reasonably interpreted as reading on a signal. This renders the claim non-statutory. (*In re Nuijten*, 500 F.3d 1546, 1356-57 (Fed. Cir. 2007). The Office suggests that the claims be rewritten to recite a “non-transitory computer readable medium”. The Office further suggests that this will not normally be considered new matter – unless Applicant’s specification does not support a non-transitory embodiment because a signal *per se* is the only viable embodiment.

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9. Claims 13 & 26 & all claims depending therefrom are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. As noted above, these claims appear to be directed toward a human being.

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 13, 14, 16, 18, 19, 21, 22, 24-27, 29, 31, 32, 34, 35 & 37-41 are rejected under U.S.C. § 103(a) as being obvious over Christofferson et al. (US Patent Number 7,006,616)

**Claims 13, 26:** Christofferson teaches a method for providing simultaneous context based audio interaction among a plurality of participants in a network based gaming environment. Christofferson teaches establishing a network based game environment using a game server (200) containing a plurality of game participants (20) and thus identification for these participants. (Any server that is used in playing a game is a “game server”.) Christofferson maintains a game state profile for each one of the game participants and establishes a plurality of concurrent voice over Internet protocol based audio conferences among the game participants based upon the game state profiles. The game state profiles include a game specific context for each game participant -- the game state profile includes at least the participant’s location in the virtual environment. (Abstract & Col 1, 37-47) Each audio conference includes two or more game

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participants having one or more shared game contexts. Every conference must have multiple participants – one cannot confer with oneself. Since the participants are all in the same game, they have at least one shared game context. Furthermore, Christofferson teaches providing sound based on location. The location in the virtual world is an attribute that permits audio communications between players.

Christofferson teaches using the game state profiles to identify a plurality of groups of participant identifications. Fig 8 shows one such group. It also indicates that there is at least one other group that may be joined by clicking the “To Hawaii” area on the screen. Each group has a plurality of participants that have the same shared game context – they are located in the same chat room. This shared context allows audio communications between participants in the group.

Christofferson teaches VOIP conferences that are simultaneous and independent. The conference that is associated with the mountain setting is independent from the simultaneous conference in the Hawaiian setting. Each of the audio conferences is associated with one of the groups of participants.

Christofferson teaches identifying a feature vector (attenuation values) including direction & distance information between pairs of participants & using this information to modify audio signals exchanged between pairs of participants within the audio conference.

Christofferson’s game server (200) is separate from the conference server (300). The conference server (300) establishes an audio path between audio mixers (310) and communications devices associated with each game participant (110). This permits audio

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communications among game participants. Each game participant device is in communication with the conference server (300) & the audio mixer (310) but does not communicate directly with the conference server. Fig 2 shows that the player stations (310) communicate directly with the game server (200).

It is Examiner's position that System Control Unit (200) and Audio Bridging Unit (300) are separate servers. However, if they are not separate servers, it is extremely well known to divide the various functions of a computer system between separate servers. This allows easier maintenance since units belonging to separate servers can be maintained without bringing down the entire system. For example, if Audio Bridging Unit (300) needed to be maintained, a substitute Audio Bridging Unit could be attached to System Control Unit (200) and the game could continue with minimal interruption. It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Christofferson (to the extent any modification is required) to separate the various components into separate servers in order to ease maintenance.

#### **Regarding the newly added limitations**

First, it is necessary to understand what is meant by a "game". Absent any details of game play, any activity can be considered a "game". Examiner interprets "game" to be any computer program that allows user input & supplies some sort of output to the user. Therefore, even if Christofferson did not explicitly state that his system can be used to play a game, Christofferson would be considered to teach a game. Thus any server that is used to implement Christofferson's invention is a "game server".

Christofferson teaches a single, centralized game server (200). This game server hosts a dynamic, multi-user networked based game – it controls the system that Christofferson describes. Furthermore, this game clearly comprises integrated VIOP capabilities. That is the whole point of Christofferson.

As noted above, it is Examiner's position that the conference server (300) is separate from the game server (200). But if it is not, separation of different functions onto different servers is obvious for the reasons outlined above. Furthermore, there are only two ways to implement the disclosed invention – the functions may be assigned to a single server or they may be assigned to separate servers. It would have been obvious to one of ordinary skill at the time of the invention to have tried both methods since both have equal expectations of success.

Christofferson teaches a plurality of separate audio mixers for each participant (Col 5, 47-52) but fails to teach that they are geographically distributed. Christofferson says that they are preferably implemented as part of audio bridging unit (300). Clearly, this leaves open the possibility of a non-preferred version. Furthermore, Christofferson contemplates a large number of participants. In cases where the number of participants is too large to be accommodated on a single server, it would have been obvious to one of ordinary skill to have more than one server. This would mean that the audio mixers would be geographically distributed -- even if only by a few feet in a server room.

Christofferson mixes audio signals in the mixer solely in response to signals sent by the game server. All of the participant stations communicate with the game server



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(200). The game server (200) provides the mixing control parameters to the audio bridging unit (300), which supplies them directly to the mixers (310). (See Figs 2 & 3.)

Christofferson teaches that the audio mixer is separate from the game participant station (110) and game server (200). As noted above, Christofferson teaches that the mixer is integral to the conference server (300). However, it is well known in the art that separate functions can be placed on different computers. This has many advantages. For instance, if mixers are placed on separate computers and a single mixer goes out, only one person is affected. Such a system is more robust. Furthermore, by dividing the functions onto different machines, the performance of the system may be enhanced — often at a lower cost. Several lower-end computers can run the conference server & mixer functions faster than a single server. Therefore there are any number of reasons one of ordinary skill would have been motivated to try splitting the function among computers. Doing so would have yielded predictable results. Therefore, Examiner concludes that the modification would have been obvious to one of ordinary skill at the time of the invention.

It should also be noted that Applicant discloses that the embodiment with the various functions are distributed among different pieces of hardware is equivalent to the embodiment where all functions are maintained on the same computer. Thus Applicant's specification indicates that these are equivalent and obvious variations. The location at which these functions are performed clearly is not a critical element of Applicant's invention and cannot serve as the basis for patentability.

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**Claims 14, 27:** Christofferson teaches that the game specific context may be membership in a group. In Fig 8, there are three groups.

**Claims 16, 29:** Christofferson teaches that the participation in a conversation is based on proximity. In Fig 8, Player F may participate in the conversations of two groups if he is in close enough proximity to both.

**Claims 18, 19, 31, 32:** Christofferson inherently teaches modifying the group of participants based upon changes in the game state profiles of game participants in the group. If a participant enters or leaves the conference, a member is added or deleted from the group.

**Claim 21, 34:** Christofferson teaches determining a plurality of groups of participants wherein each group of game participants possessing a shared context that permits the transmission or receipt of audio communications among game participants in that group. Furthermore, Christofferson teaches dynamically switching at least one participant between two distinct groups. (Fig 8) Participants may form multiple groups in a chat room and there may be multiple chat rooms. A participant may move from group to group within a chat room or move to an entirely different chat room.

**Claims 22, 35:** Christofferson's game server is a back-to-back user agent that maintains audio conferences on behalf of the game participants. (Abstract) The system sets up each media path to point to the communications device of each game participant. If it did not, no conference would be possible.

**Claims 24, 37:** Christofferson teaches determining an audio feature vector for each pair of audio conference participants based upon the game state profiles associated with the

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participants and modifying audio signals transmitted between the pair of audio conference participants in accordance with the audio feature vector. Christofferson teaches that the sound heard depends on the position (i.e., direction & distance information) of the various participants. It uses this feature vector to modify the audio signals exchanged between participants. (Col 3, 43-47)

**Claims 25, 38:** Christofferson teaches changing the sound based on changes in relative position. (Col 3, 43-47) This is modifying the audio feature vector in response to changes in the game state profiles of the audio conference participants.

**Claim 39:** Christofferson teaches chat room (800) s with a mountain scene that is particularly suited for discussion of outdoor sports. (See discussion of Fig 8.)

**Claims 40 & 41:** Christofferson teaches participation in multiple conferences based on single shared contexts. Furthermore, Christofferson teaches that in one embodiment the system may amplify at least one conversation to an audible level regardless of the distance between avatars. (Col 17, 48-51) Thus the player may participate in one conversation based on distance between participants & another conversation that is independent of distance.

### ***Response to Arguments***

12. Applicant's arguments filed 18 September 2010 have been fully considered but they are not persuasive. The arguments are drawn to the amended claims & are answered in the rejection above.

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***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Corbett B. Coburn whose telephone number is (571) 272-4447. The examiner can normally be reached on 8-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on (571) 272-4690. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Corbett B. Coburn/  
Primary Examiner  
Art Unit 3714